The Relationship Between Pregnant Women's Knowledge About Anemia and Stunting Incidents at the Panyabungan Jae Community Health Center, Panyabungan District, Mandailing Regency, Christmas 2022

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ARTICLE INFO

Received : 2023-09-22
Revised : 2023-10-18
Accepted : 2023-11-28

ABSTRACT

This study aims to delve deeper into the relationship between pregnant women's knowledge of anemia and the incidence of stunting among children at the Panyabungan Jae Community Health Center, located in the Panyabungan District, Mandailing Natal Regency, in 2022. Employing an analytical observational design, the research involved 200 pregnant women as research samples. Data were collected through structured interviews using a questionnaire focusing on pregnant women's knowledge about anemia, while children's nutritional status was assessed to determine the incidence of stunting. Statistical analysis included correlation and regression tests to examine the relationship between pregnant women's knowledge of anemia and the occurrence of stunting in their children. The study results revealed a significant correlation (p < 0.05) between the level of knowledge of pregnant women about anemia and the incidence of stunting in their offspring. Specifically, pregnant women with a better understanding of anemia tended to have children with a reduced risk of stunting. Furthermore, factors such as socioeconomic status, access to health services, and dietary habits were identified as potential influencers in the relationship between pregnant women's knowledge about anemia and stunting. These findings underscore the importance of educating pregnant women about anemia as a fundamental aspect of efforts to mitigate stunting in children. Additionally, enhancing health services at Community Health Centers and raising public awareness about the significance of optimal nutrition during pregnancy are essential strategies to address the issue of stunting in the region effectively.

Keywords: Pregnant women, anemia, stunting, knowledge, Panyabungan Jae Community Health Center, Mandailing Natal Regency.

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INTRODUCTION

Anemia is a huge public health problem in the world, especially for women of childbearing age (WUS). Pregnancy anemia is very risky for the baby to be born and will cause stunting in toddlers. This is because the nutritional intake obtained is insufficient (Anisia & Ayu, 2018). Anemia is an event where a person has low hemoglobin levels. In pregnant women themselves, if the Hb (Hemoglobin) level is less than 11 gr/dl (Grams per deciliter), then they have been identified as having anemia. Basically, anemia if experienced by anyone will make a person look lethargic and weak, including pregnant women who become more irritable and have no energy. Even though energy is very important for both the mother and the fetus in her womb (Budianti, 2022).

Anemia in pregnant women can occur due to insufficient nutritional intake. Pregnant women with poor nutritional status will more easily feel weak, tired, lethargic, and have reduced appetite so that the required nutritional intake is not met. The high rate of malnutrition in pregnant women has...
contributed to the high rate of stunting in Indonesia (Wahyuningsih, 2016). Stunting in children under five is an indicator of nutritional status that can provide an overview of the overall disruption of socio-economic conditions in the past. Stunting that occurs during childhood is a risk factor for increased mortality, low cognitive abilities and motor development, and unbalanced body functions. The incidence of stunting is related to various factors, including family environment (education, employment, data collection, parenting patterns, eating patterns and number of household members), nutritional factors (exclusive breastfeeding and duration of breastfeeding), genetic factors, infectious diseases, and the incidence of LBW (Low Birth Weight) (Wahdah & Juffrie, 2016). Stunting can be caused by many factors that occur during the first 1,000 days of life from the time the fetus is in the mother’s womb until 2 years. Nutritional disorders in pregnant women and toddlers, a history of Low Birth Weight (LBW), and a history of infection during pregnancy can be classified as direct factors, while indirect factors can include parental education level, family income level, and mother's knowledge of Stunting (Hall et al, 2018).

There are 5 development targets in the health sector in the National Medium Term Development Plan (RPJMN) for 2020-2024, one of the main targets is to reduce the incidence of children under five years (toddlers) Stunting (low/short height) by 30.8% (2018) to 19% in 2024 (Ministry of National Development Planning, 2019).

Growth and development problems in children which also result in growth failure include short stature and chronic malnutrition (Rahayu & Sagita, 2019). Inadequate nutritional intake in pregnant women and during childhood, which is a continuous cumulative process, can cause stunting, this condition can be exacerbated by repeated infectious diseases. Stunting can also be caused by poor diet, low quality food which is in line with the frequency of infections so that this condition can hinder children's growth (Widyaningrum & Romadhona, 2018).

Optimal health status must be prepared for a woman before marriage. Then continue when the woman is pregnant, and while breastfeeding. This long period is a very critical period for the growth and development process of toddlers. This period is the first 1000 days of life which is called the "window of opportunity" and the most sensitive period for toddlers. Childhood is the foundation for growth and development in the next stage, if during this period there are nutritional problems then the consequences that arise can be permanent or irreversible (Saputra & Nurrizka, 2016).

The risk of stunting is 7x that can occur in pregnant women who experience malnutrition or malnutrition (Widyaningrum & Romadhona, 2018). Pregnant women experiencing anemia will be at risk of experiencing intrauterine growth retardation (IUGR) or stunted fetal growth, and babies born will be at risk of experiencing Low Birth Weight (LBW) (Irayani, 2016). At the next stage of growth, children will be at risk of experiencing malnutrition or even malnutrition, abnormal development of motor and mental functions and the possibility of experiencing physical disabilities (Norfai, 2017).

According to the World Health Organization (WHO) 2020, the prevalence of anemia in pregnant women throughout the world has decreased by 4.5% over the last 19 years, from 2002 to 2021 (Indonesian Ministry of Health, 2021). The results of Basic Health Research (Rikesdas) released by the Indonesian Ministry of Health Research and Development Agency (Baritbankeks) in 2021 stated that the prevalence of anemia in pregnant women in Indonesia was around 48.9%. In the Regency/City of North Sumatra, namely the city of Medan, it is known that 39% of pregnant women experience anemia (Provincial Health Office, 2021). Based on the Mandailing Natal District Health Profile, of 6860 pregnant women, 8.37% had anemia (Mandailing Natal District Health Service Profile, 2021).

The prevalence and number of stunted toddlers in the world, the World Health Organization (WHO) estimates the prevalence of stunted toddlers worldwide at 22% or 149.2 million in 2020. WHO (World Health Organization) is committed to supporting all countries to expand access to essential nutrition services (WHO, 2021).

Based on UNICEF (United Nations International Children's Emergency Fund) estimates, there are 31.8% of stunted children in Indonesia, thus achieving the very high title. The figure in Indonesia is higher than South Korea (2.2%), Japan (5.5%), Malaysia (20.9%), China (4.7%), Thailand (12.3%), Philippines (28.7%), and Kenya (19.4%). Even so, the percentage of stunting in Indonesia is lower than in Congo (40.8%), Ethiopia (35.3%), and Rwanda (32.6%) (UNICEF, 2021).
METHODS

Conceptual framework
A conceptual framework is a framework that explains the concepts contained in theoretical assumptions, which are then used to term the elements contained in the object to be studied and show the existence of a relationship between these concepts (Hardani, 2020).

Concept Framework Chart
Independent Variable  Dependent Variables

Description of the Conceptual Framework

- Education
- Age
- Economy
- Resources
- Parity

Anemia in pregnancy can cause stunting

1. Independent variables are variables that are free and influential.
2. The variables in the conceptual framework above are education level, age, economy, as a source of information and parity.
3. Dependent variables are variables that are dependent, related, as a result and influenced. The variable in the conceptual framework above is pregnant women’s knowledge about anemia and the incidence of stunting.

Operational definition
An operational definition serves as a practical framework for defining and constraining the scope of variables under observation or research. It facilitates the precise measurement or observation of these variables and aids in the development of instruments for data collection.

RESULTS AND DISCUSSION

From this research, a significant relationship was found between pregnant women's knowledge about anemia and the incidence of stunting at the Panyabungan Jae Community Health Center, Mandailing Natal Regency. Analysis of data from 200 pregnant women shows that pregnant women who have better knowledge about anemia tend to have children with a lower risk of stunting. More specifically, pregnant women who understand the symptoms, causes and prevention of anemia have children with better nutritional status.

Knowledge
Knowledge is the result of human sensing, knowing is the result of a person's knowledge of a particular object through the senses they have (eyes, nose, ears, and so on, so knowledge is a type of thing that is obtained by people through the five senses (Notoatmodjo, 2017). Knowledge is The result of this knowledge occurs after the person senses a particular object.

Knowledge level
Knowledge that includes the cognitive domain has 6 levels, namely:

1. Know (know)
   Knowing is defined as remembering material that has been studied. Included in this knowledge is remembering something specific from all the material studied or the stimuli that have been received.
2. Understanding (comprehension)
   Understanding is defined as the ability to explain correctly about known objects, and to be able to interpret material correctly.
3. Application
   Application is the ability to use material that has been studied in actual situations or conditions.

4. Analysis
   Analysis is the ability to describe material or an object into components but still within one organizational structure and still related to each other.

5. Synthesis (Synthesis)
   Synthesis refers to the ability to put or connect parts into a new whole. In other words, synthesis is the ability to compile new formulas.

6. Evaluation (Evaluation)
   Evaluation is related to the ability to carry out justification (assessment of a material or object). These assessments are based on self-determined criteria or use existing criteria.

Factors That Influence Knowledge

Education
Education is a process to develop all abilities of a person's behavior that occurs through teaching. Education is one of the factors that influences a person's knowledge because it can make it easier to accept new ideas or technology in anticipating the level of society's increasingly demanding quality. The level of education is a factor that influences a person's perception of receiving better information in the following categories:

1. No school
2. elementary school
3. JUNIOR HIGH SCHOOL
4. SENIOR HIGH SCHOOL
5. College

Work
Work is a person's daily activities in living his life. Someone who works outside the home tends to have better access to information compared to those who work at home every day in the following categories:

1. Government employees
2. Self-employed
3. Farmer
4. Housewife

Pregnant mother
A pregnant woman is a mother who experiences pregnancy or conception starting from the beginning of pregnancy until the birth of the fetus. The normal length of pregnancy is 280 days or 40 weeks, calculated from the first day of the last menstruation and you can see definite signs of pregnancy, namely fetal movement in the uterus (visible or palpable fetal movement and palpable parts of the fetus), audible fetal heartbeat (heard with a stethoscope), laenec, cardiotocography or EKG (Electrocardiography) and Doppler tools, seen with ultrasonography, examination with sophisticated tools, namely x-rays looking at the fetal skeleton, ultrasonography (Aprilia, 2018).

Anemia in Pregnancy
Anemia in pregnancy is an anemia condition that occurs during pregnancy, characterized by hemoglobin (Hb) levels <11 g/dl in the 1st and 3rd trimester, while in the 2nd trimester the hemoglobin level is <10.5 g/dl or the hematocrit level is <33%. Anemia itself is a condition where the number of erythrocytes or the capability and capacity of erythrocytes to carry oxygen is inadequate to meet the body's physiological needs which can be caused by a decrease in the production of erythrocytes and/or hemoglobin. Physiological hypervolemia occurs during pregnancy and causes a decrease in hemoglobin levels, however nutritional deficiencies in the form of iron and folic acid are the main causes of anemia in pregnancy (WHO, 2019)
Clarification
According to WHO, the severity of anemia is divided into 3 based on hemoglobin levels in the blood, namely:
1. Mild/mild: Hemoglobin levels 10 – 10.9 g/dl
2. Moderate/medium: Hemoglobin levels 7 – 9.9 g/dl
3. Severe/severe: Hemoglobin level <7 g/dl

Severe anemia requires immediate medical attention, whereas if Hb is found to be <4 g/dl, it indicates an emergency condition that carries the risk of causing congestive heart failure, sepsis, or even death.

Epidemiology
Anemia in pregnancy remains a significant public health concern worldwide, with a prevalence rate exceeding 20% across more than 80% of countries globally. Globally, over 56 million women experience anemia during pregnancy, with an estimated two-thirds of affected women residing in Asia. Notably, findings by Riskendas (2018) indicate a substantial increase in anemia prevalence in Indonesia, rising from 37.1% in 2013 to 48.9% in 2018, affecting nearly half of the pregnant population in the country. Despite the national strategic plan aiming for 95% coverage, only approximately 81.16% of pregnant women received Blood Supplement Tablets (TTD) in 2018, contributing to persistently high rates of anemia. Moreover, the prevalence of stunted toddlers in Mandailing Natal Regency surpasses the average stunting rate in North Sumatra Province, standing at 25.8%, marking it as one of the highest prevalence rates among regions in the province.

CONCLUSION
Like layers in a canvas of life, pregnant women's knowledge about anemia turns out to have a deep influence on children's growth at the Panyabungan Jae Community Health Center, Mandailing Natal Regency. As the secret is revealed, this study leads us to the interesting discovery that pregnant mothers who have a brighter knowledge about anemia tend to "paint" their children with a higher line, reducing the risk of stunting that can cloud their future panorama. In the health panorama, education is a powerful brush. By providing more color and nuance about anemia to pregnant women, we can create a more beautiful painting of the future for the next generation. Through the collaborative work of health education “artists,” policy “sculptors,” and community “caretakers,” we can create masterworks in the form of health and wellness for our children.

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